

What is claimed:

1. Method of making an industrial fabric by using laminated object manufacture.
- 5 2. Method according to claim 1,
characterized in
that the method comprising the steps of laminating a series of
layers of film material and cutting perforations in the films of the
laminate to provide a foraminous fabric.
- 10 3. Method according to claim 1 or 2,
characterized in
that the film layer is bonded to the previous layer by application of
pressure, preferably by passing the two components through a
bonding nip.
- 15 4. Method according to one of the preceding claims,
characterized in
that adhesive having been applied to the underside of the most
recent layer to be laid down.
- 20 5. Method according to one of the preceding claims,
characterized in
that the step of cutting perforations is performed using laser light.
6. Method according to one of the preceding claims,
characterized in
that the method involving the step of cutting perforations in at least
one of said film layers after the film layer is secured to another film

layer or film layers, wherein one of said another layer or layers having pre-cut perforations therein.

7. Method according to one of the preceding claims,
characterized in
5 that the cut-out waste is removed by the following means alone or in combination: directing a burst of air at the waste material via a high pressure air jet or by using an air knife or sucking the waste by vacuum.
8. Method according to claim 7,
10 characterized in
that the method further comprise the step of permanently bonding the layers by applying pressure load after removal of said cut-out waste.
9. Method according to one of the preceding claims,
15 characterized in
that in a cut-out step one or individual laid down films are perforated.
10. Method according to one of the preceding claims,
characterized in
20 that the method further comprises the steps of starting with the largest holes in the first layer and then work up with subsequent layers possessing smaller holes.
11. Method according to one of the preceding claims,
characterized in
25 that the perforations are cut-out in such a way that the aperture size, shape and/or distribution varies deliberately and / or is

randomised throughout the fabric wherein the porosity of the fabric is kept substantially uniform.

12. Method according to one of the preceding claims,
characterized in

5 that the manufacture of the fabric is stopped at a semi-complete stage.

13. Method according to claim 12,
characterized in

10 that a further blank film layer is bonded to the laminated structure generating a semi-complete work piece, and that said semi-complete work piece is stored in roll form for further processing by cutting the blank film layer and the addition of a further set of individually cut laminate which can form the opposite face of the fabric to the wearside.

15 14. Method according to claim 13,
characterized in

that a reference point is included to said semi-complete work piece for precise location of the laser beam with respect to said work piece.

20 15. Method according to one of the preceding claims,
characterized in

that the manufacturing includes the step of spiral winding the first formed laminate over rollers and bonding the laminated fabric to a return of the spiral.

25 16. Method according to one of the claims 1 to 14,
characterized in

that the film layers are located side by side and the film layers of the subsequent layer may straddle the joints between the films in the first layer.

5 17. Industrial fabric manufactured with a method according to one of the claims 1 to 16.

18. Industrial fabric according to claim 17,
characterized in
that the orifices of the paperside apertures are smaller than at the
wearside.

10 19. Industrial fabric according to claim 17 or 18,
characterized in
that the thickness of the various film layers being laminated
together are different, preferably that the thickness of the layers
towards the intended machine side is thicker than the ones towards
15 the intended paper side.

20. Seamed industrial fabric comprising a laminate of foraminous films,
wherein seam loops are defined by film material.

20 21. Seamed industrial fabric according to claim 20,
characterized in
that said seam loops being provided by folding a fabric structure to
provide a double thickness fabric having seam loops.

22. Seamed industrial fabric according to 20 or 21,
characterized in
that said seam loops being provided by encircling film material

around a fabric inner so as to define loops between said encircling film and said inner.

23. Industrial fabric or seamed industrial fabric according to one of the claims 17 to 22,
5 characterized in that said fabric is a paper machine clothing, preferably a dryer fabric.

24. Industrial fabric or seamed industrial fabric according to one of the claims 17 to 23,
10 characterized in that said film material comprises any of the following materials either alone or in combination: polyester, polyimide or PEN (polyethylenenaphthalate), preferably high performance films, such as MYLAR (trade mark of DuPont), KAPTON (trade mark of DuPont)
15 or TEONEX (trade mark of DuPont).

25. Industrial fabric or seamed industrial fabric according to one of the claims 17 to 24,
characterized in that the individual film materials used for the individual layers of the
20 fabric may be the same or different.

26. Industrial fabric or seamed industrial fabric according to one of the claims 17 to 25,
characterized in that the film may comprise nonwoven sheets made from fibres.

25 27. Industrial fabric or seamed industrial fabric according to one of the claims 17 to 26,

characterized in
that the adhesive material for bonding adjacent film layers comprise
any of the following materials either alone or in combination:
epoxies, epoxy bismaleimides, silicone RTV's.

5 28. Industrial fabric or seamed industrial fabric according to one of the
claims 17 to 27,
characterized in
that said fabric comprise an array of yarns extending in the intended
running direction of said fabric.

10 29. Industrial fabric or seamed industrial fabric according to one of the
claims 17 to 28,
characterized in
that said yarns are monofilaments or multifilaments and preferably
made from any of the following materials: steel, polyester,
15 polyamide, polyolefin, PPS, PEEK para-aramid or from inorganic
material, for example glass or basalt.

30. Industrial fabric or seamed industrial fabric according to one of the
claims 17 to 29,
characterized in
20 that said yarns are at least partly, and preferably fully, encapsulated
in machine direction lands of said fabric.

31. Industrial fabric or seamed industrial fabric according to claim 30,
characterized in
that said yarns have been incorporated into the fabric structure,
25 after having initially laid down a number of layers.

32. Industrial fabric or seamed industrial fabric according to claim 30 or 31,
characterized in
that at the position in the Z direction where said yarns are to be
5 included a next film layer have been laid down as strips orientated
in the running direction with small gaps between them to
accommodate the yarns.
33. Industrial fabric or seamed industrial fabric according to one of the
claims 30 to 32,
10 characterized in
that the film thickness will correspond to the yarn diameter.
34. Industrial fabric or seamed industrial fabric according to one of the
claims 30 to 33,
characterized in
15 that void not filled by the yarn is filled with a polymer to secure the
yarn to the structure.